

ABSTRACT

The present invention provides an improved semiconductor flipchip package that includes a central cavity area on the first major side for receiving a flipchip die therein. The package substrate is substantially made from a single material that serves as the support and stiffener and provides within the cavity floor all the connecting points for flipchip interconnection to the silicon die. The integral cavity wall serves as a stiffener member of the package and provides the required mechanical stability of the whole arrangement without the need for a separate stiffener material to be adhesively attached. The cavity walls may contain extra routing metallization to create bypass capacitors to enhance electrical performance. The invention discloses optional methods to cover the silicon die to enhance thermal performance of the package.

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